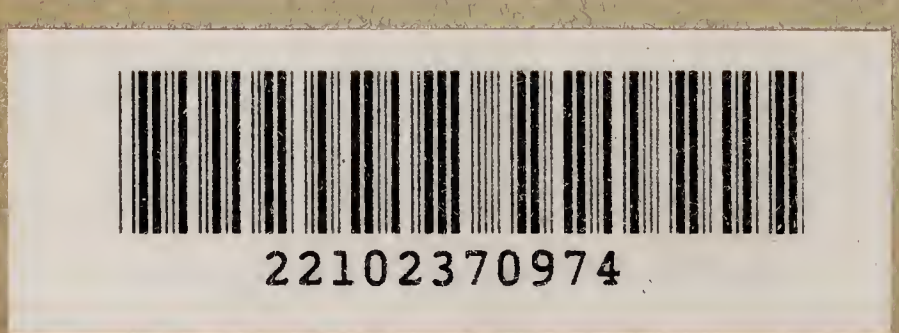
THE VIBRATOR.

C. H. LIEDBECK. INVENT.



Edgar F. Wright

A

DESCRIPTION

OF

THE VIBRATOR

(ENGL. PAT. 1890. N:o 4390.)

AND

DIRECTIONS FOR USE

BY

C. H. LIEDBECK.

STOCKHOLM, 1891.
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TRADE MARK.

Vibrators are made and sold by the Vibrators company address Stockholm.

N:o

PREFACE.

Vibration is one of the most important forms of passive movements, used in medical gymnastics. It is stimulating paretic and anæstetic nerves, tranquilizing overexcited nerves, diminishing abnormal plethory, resorbing effusions in tissues and organs and promoting a more healthy and natural circulation in the body. Used in combination with pressures, frictions and liftings, it effects a powerful influence on the muscles, the nerves and the inner

organs, such as the heart, the lungs, the digestive organs etc.

Vibration performed with the hands only must naturally be more or less limited as to time and rapidity of motion, as it exhausts the strength of the medical gymnast to a higher degree than any other movement. If the whole possible effect shall be attained it is, therefore, necessary to perform the vibration by help of machines for such a length of time and with such a rapidity, as might be required in each case. The vibration-machines hitherto used for kinetic purposes suffer from certain inconveniences. They generally require space and a very strong motive power and can only be adapted to a few commencing positions.

By the so called »Vibrator», a machine invented by Director C. H. Liedbeck of Stockholm, these inconveniences have been removed. Being of a small size it takes but little room and, being portable, can be easily conveyed by anyone who is treating his patients in their homes. It may be placed on a table, a chair or the knees or held

under the arm etc. and in this way it is well suited for different commencing positions. And, moreover, by the Vibrator a great many percussion- or chopping-movements can easily be applied.

On a closer examination of this machine one cannot but admire its ingenious construction and the fineness of the almost innumerable forms of vibrations it is capable of performing.

To avoid extensive and complicated descriptions a large number of illustrations, carefully executed and very instructive, have been inserted in the textbook, compiled for the use of the Vibrator. By means of these illustrations and the concise and simple directions given in the text, assisted by the patient's own discrimination and sense of feeling, there will be no difficulty for any one to arrange and profit by the different kinds of vibrations in the most effectual way.

The Vibrator correctly applied is, therefore, to be considered as a very powerful and much needed help for the medical gymnast and other medical

men in their laborious work, and in numerous cases as an efficient means of selfhelp at home.

Stockholm the 20th of March 1891.

T. J. Hartelius.
M. D., Professor, late Lecturer at the Royal Central Gymnastic Institution of Stockholm.

We, the undersigned, entirely concur in the above opinion expressed by Professor Hartelius:

Robert Murray.
Professor, Lecturer on Kinesipathy at the Royal Central Gymnastic Institution of Stockholm.

L. M. Törngren.
Professor, Director and Lecturer at the Royal Central Gymnastic Institution of Stockholm.

Uno Helleday.
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Thure Brandt.
Medical gymnast, late Mayor.

INTRODUCTION.

»Vibration may be produced in many ways by machines vibrating at a rotatory motion».

P. H. Ling.

Through its powerful and quick effect the vibration-movement has obtained an enormously extensive use in medical gymnastics. It affords, under various forms, a most valuable remedial influence in the treatment of the greater number of affections of the muscles and the nerves, diseases of the heart, laryngitis and pneumonitis, numerous disorders of the digestive organs, glandular swellings etc.

But in order to derive the greatest benefit from this important movement, it must necessarily be practised for a sufficient length of time and with the utmost regularity and rapidity and in many cases be repeated several times a day.

This is generally too difficult for the human hand to perform and often quite impossible.

P. H. Ling, father of the Swedish gymnastics, was well aware of the great importance of using mechanical means for the application of vibration-movements, when he said in his General Principles of Gymnastics: »Vibration may be produced in many ways by machines vibrating at a rotatory motion».

Every one who has practised medical gymnastics is sure to have experienced the insufficiency of merely manual force in repeating over and over again vibration-movements of some duration and will thus be able fully to appreciate the great value of an easily managed, powerful and portable vibration-machine.

Being in possession of all these advantages the Vibrator, which is hereby introduced into the market, is likely to satisfy any just claims upon a good vibration-machine.

DESCRIPTION OF THE VIBRATOR.

The Vibrator consists of four principal parts:

The driving mechanism, fig. 1 *a*, fixed inside the case, is composed of two cogwheels, placed in a support above each-other, and the winch-handle appertaining.

The flexible shaft, fig. 1 *b*, consisting of an overplaited spiral at each end of which a wormed tap is placed.

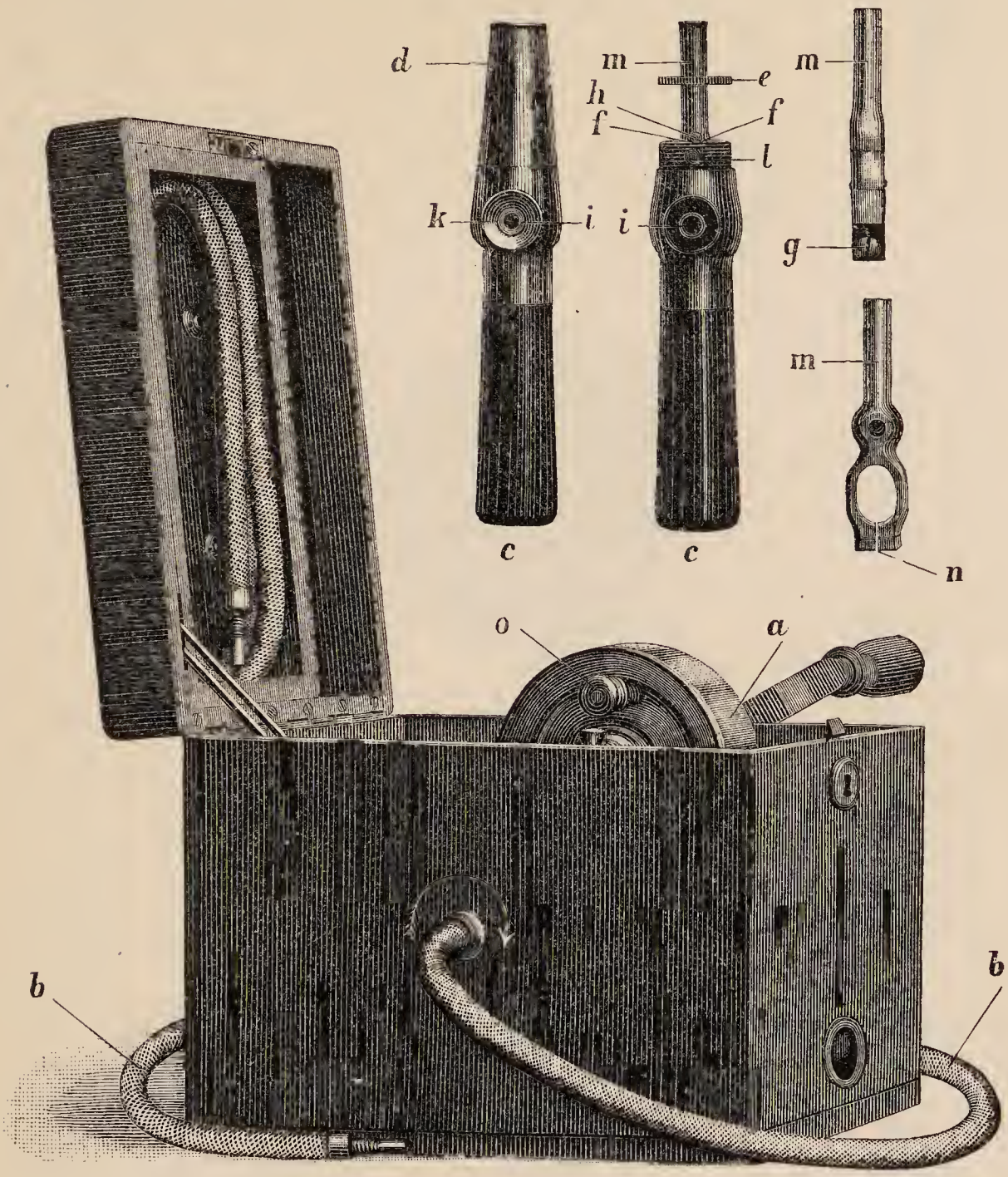

Fig. 1.

The vibrator, fig. 1 *c*, which contains the vibrating agent and an eccenter, with their axles and axle-bearings.

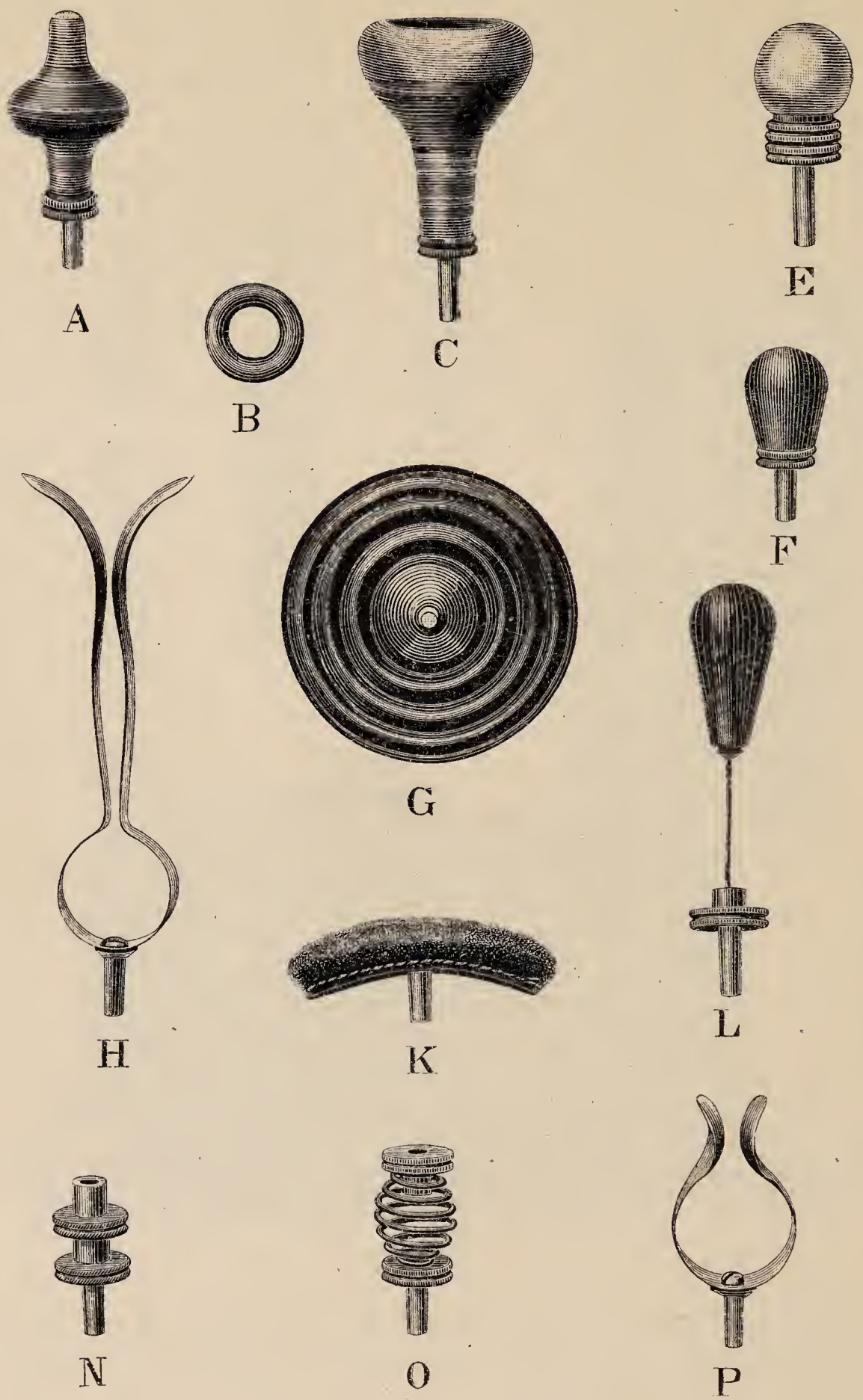

Fig. 2.

The contacts, fig. 2, of different shapes to suit the different objects, which are to be attained by transplanting the vibrations on different parts of the body.

OILING AND CLEANING.

All the axle-bearings of the machine must occasionally be well oiled. On the driving mechanism, fig. 1 *a*, the oil is to be poured into the holes in the support. When the Vibrator, fig. 1 *c*, is to be lubricated, the cap *d* must first be unscrewed, the felting-stuff *e* taken away and then the oil poured in at *f*, whereby the vibrator is kept in the position indicated on the illustration. When the gliding sides of the vibrating agent, the eccenter and its axles and bearings are to be lubricated, the spline *h* is pulled out, the eccentric layer *k* turned off, the eccenter *i* taken away and the oil poured into the large cavity.

When it wants cleaning or any clacking or flapping sounds are produced by the vibrations, the screw *g* must be tightened. The above said parts having been unscrewed, the axle *l* is struck out and the vibrating agent *m* removed. The screw *g* is unscrewed and the ring in the fissure *n* filed off a little and then restored to its place and the Vibrator put together again.

The felting-stuff *e* round the vibrating agent *m* — for the collecting of superfluous oil — is to be replaced by a new one when required.

Fig. 3.

HOW TO PUT IT TOGETHER.

Put the winch-handle into the larger hole and one of the taps of the flexible shaft into the smaller hole on opposite sides of the case. The winch is turned round, being in this way at the same time as the flexible shaft screwed on to the driving mechanism fig. 3. The other

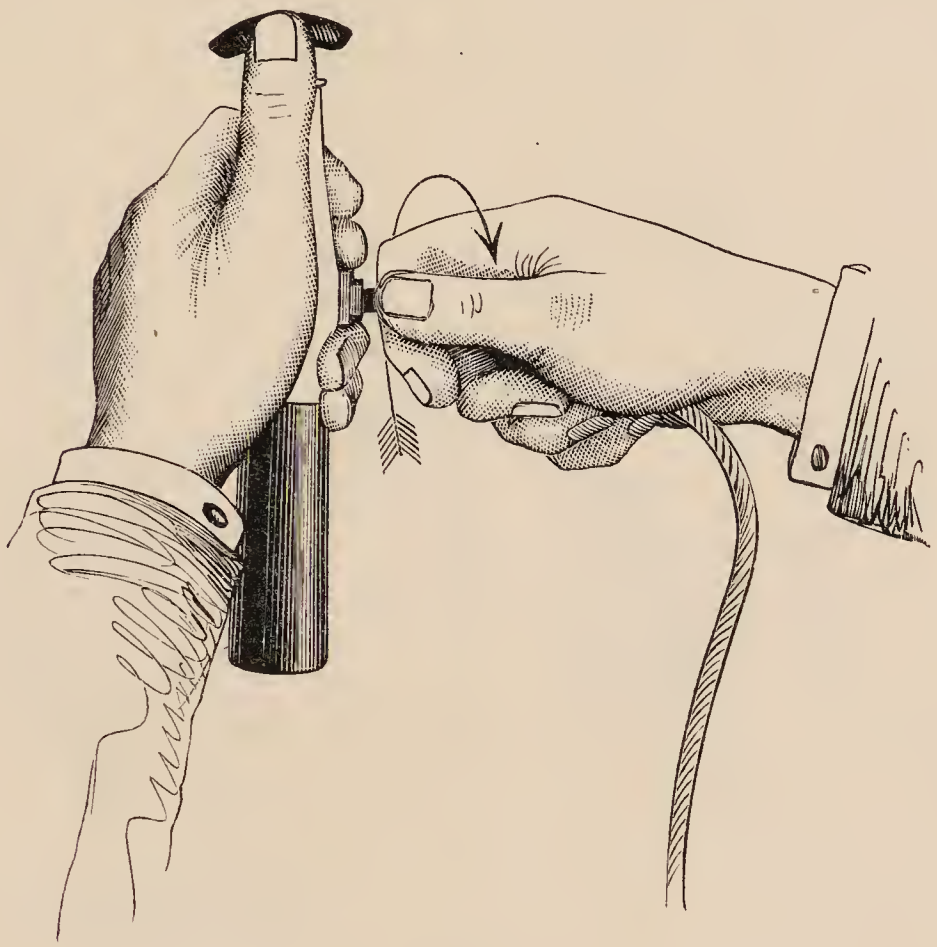

Fig. 4.

end of the flexible shaft is screwed on to the eccenter by keeping the vibrating agent, while the screwing is performed, in one of the contacts, fig. 4. In this figure the vibrating agent is held by the thumb of the left hand. It is to be screwed on in the direction of the arrow.

The contacts, fig. 2, are to be *turned* on to the vibrating agent, one or another as required for different

purposes. They are also to be *turned* off from the vibrating agent.

All the different parts may in the same way be separated from each other: the winch-handle and the flexible shaft by holding the latter while turning the former towards one-self (backwards) until one of them becomes loose. Then the knob *o* on the driving mechanism is

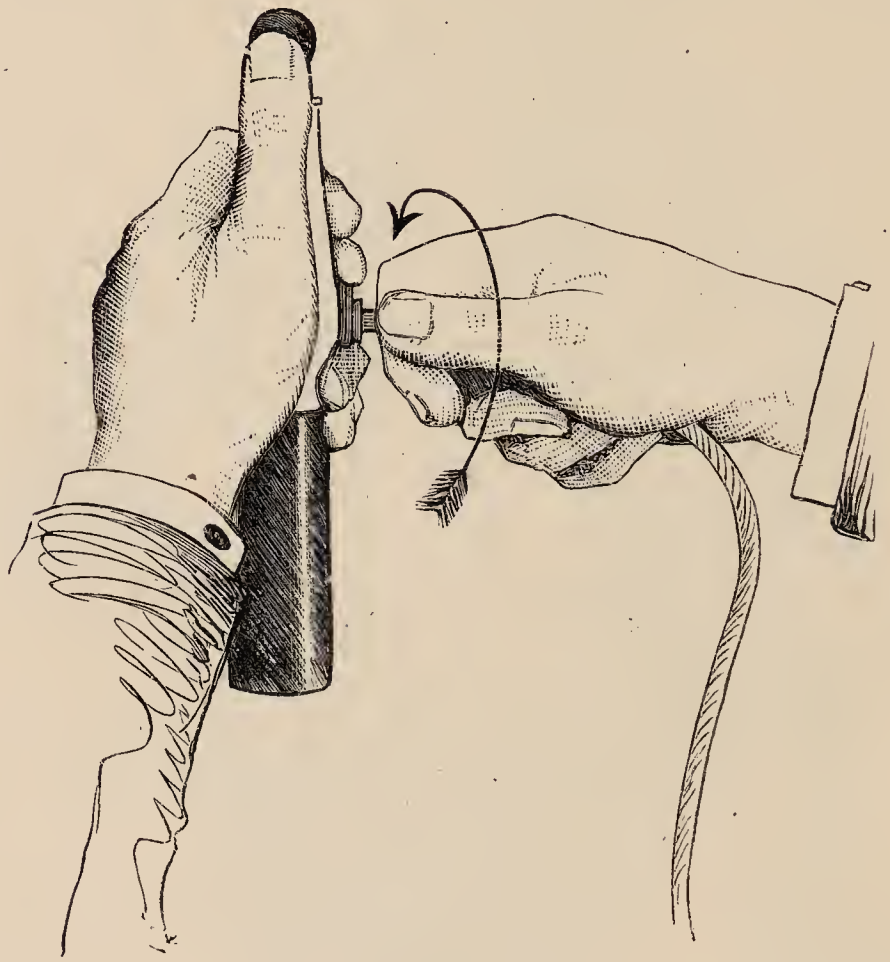

Fig. 5.

pressed in, fig. 1 *a*, while the remaining part is screwed off, whereby the flexible shaft must be turned in the direction of the arrow. The vibrator is unscrewed from the flexible shaft as shown in fig. 5. The unscrewing is made in the direction of the arrow. Meanwhile the vibrating agent is retained in the hand.

DIRECTIONS FOR USE.

When the Vibrator is to be used, it must *always* be taken and held by the handle.

When vibration is applied at high pressure, the flexible shaft ought to be kept as straight as possible. If bending

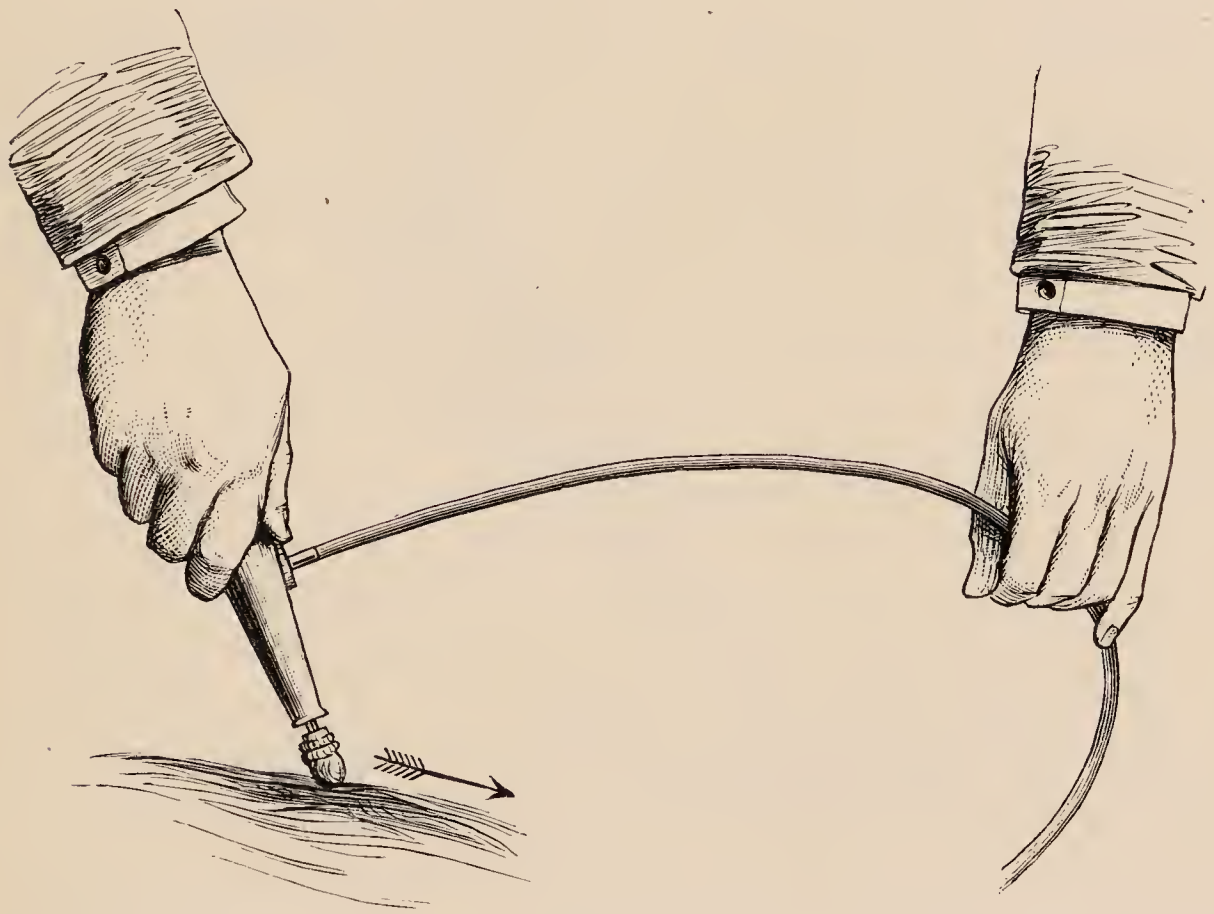

Fig. 6.

cannot be avoided, it is advisable to support it gently with the other hand or some other object, fig. 6.

When vibrations and frictions are combined, the friction-movement ought chiefly to be directed *towards* or *from* the point, where the flexible shaft is screwed on

to the eccenter, according to fig. 6 and 7. Obs. the direction of the arrow!

When vibration together with friction is performed at high pressure, as for instance on very thick muscles or in order to reach deep-lying nerves and inner organs, the friction must be made very *slowly*. Violent pressions are always to be avoided.

Fig. 7.

The machine must be turned with uniform motion, as the effect of the movement to a very large extent depends on the regularity of the motion and the movement itself is otherwise less agreeable to the patient. The speed ought to be about 100 or 120 turns a minute. If more rapid movements are required, the speed of the winch-handle has to be increased.

Every assistance at hand must gratefully be accepted, whenever the Vibrator is to be used, although, as indicated in several cases, it is possible to do without any help.

From the part of the body, where the vibrations are to be applied, all *tight-fitting* garments or *thick* and *narrow* ones — such as *coats*, *braces*, *stays* etc. — should be removed.

The commencing position indicated in each particular case must always be taken and strictly maintained.

The respiration must continue quietly and freely, while the vibration is being received.

If the movement seems to be too strong or disagreeable, the intermediate piece O fig. 2 has to be fitted on. The fingers of the disengaged hand may also serve to moderate the vibrations instead of — or in conjunction with — the medium O.

When vibrations are applied to the head, the medium O must always be used in the beginning.

Head-vibrations must not last very long, as a rule.

Where several contacts are indicated at a certain vibration-movement, the first one is to be used when the mildest form of the movement is applied.

The medium N fig. 2 serves to enlarge the vibrations and to enable the operator to turn the handle without displacing the contact.

The best result of the vibration will in most cases be obtained by repeating it several times a day.

Seconds and minutes are given for the benefit of people, who are less accustomed to the use of this sort of machines.

If advice as to the use of the Vibrator can be obtained from professional men — medical men or gymnasts — so much the better; such men being able to point out almost innumerable important modifications of the different forms of vibration, whereby the Vibrator will be of much greater use.

CLASSIFICATION OF MOVEMENTS.

In order to arrange the most common vibration-movements, used by medical gymnasts, in a comprehensible way and thus to make them practically accessible to a larger public, it has been found convenient to classify them as follows.

Vibrations applied to:

THE HEAD AND THE NECK.

Anterior part	I—XI.
Posterior part.....	XII—XV.

ABBREVIATIONS,

to be explained on the last page.

THE HEAD AND THE TRUNK.

ANTERIOR PART.

I. **Sitting horizontal front frict. vibration**. Com. pos. = upright sitting position, the hands on the hips or resting on the thighs. Opr. supports Pn.'s neck with his left hand. Fig. 9. Cont. K, F, fig. 2. Mov. is performed with a slight pressure and slow friction in parallel lines from the central part of the forehead sidewards. Fig. 8, 27. 10—20 sec. Is also performed without friction with point-pressure only.

The medium O is always to be used in the beginning, when vibrations are applied to the head. Fig. 10.

II. **Sitting vertical front frict. vibration.** Com. pos. = I. Fig. 10. Cont. K, F. To be performed with a slight

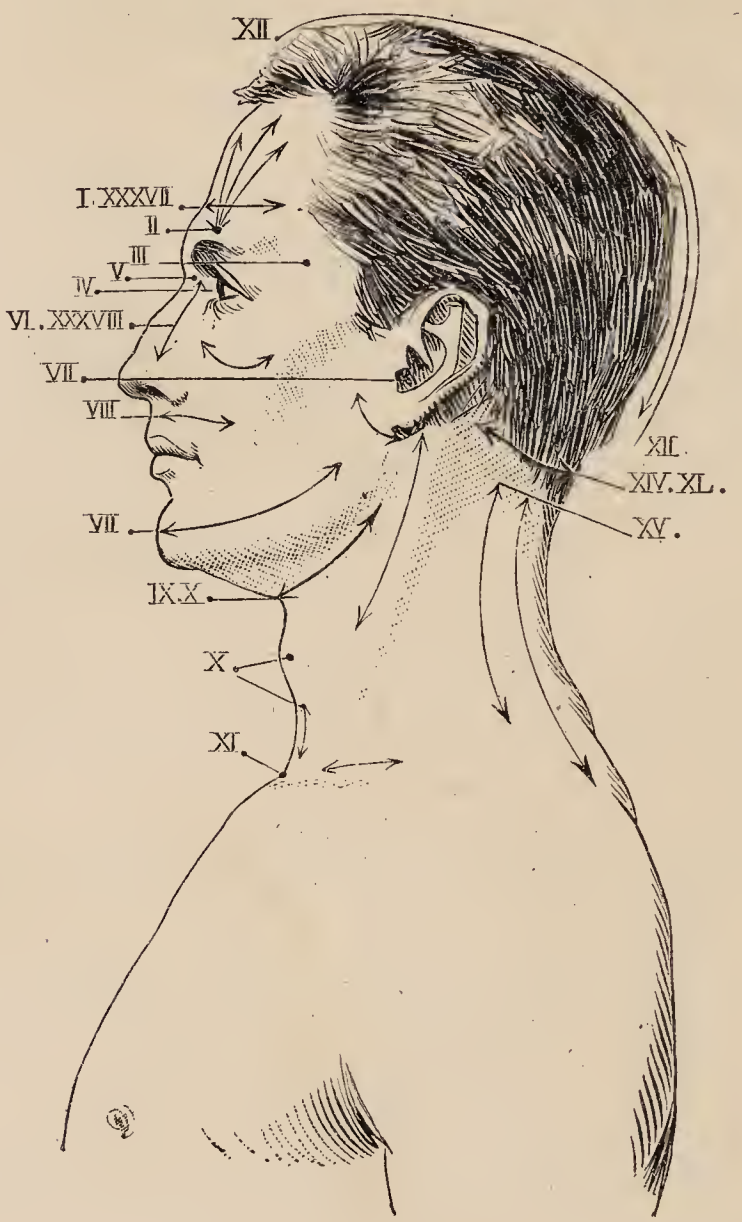

Fig. 8.
Mov. I—XV, XXXVII—XL.

pressure und slow friction from the eyebrows up to the hair. Fig. 8—27. 10—20 sec. etc. as in I. Percussive or frictional vibrations are also applied along the upper and lower orbits.

III. **Sitting temple pressure vibration.** Com. pos. = I. Cont. K, F. With his free hand Opr. supports the opposite part of Pn.'s head. Only a very slight application of the cont. Fig. 8, 27. 10—15 sec. A short interruption and then repetition.

Fig. 9.
Mov. I.

IV. **Sitting eye vibration.** Com. pos. = I. Fig. 11. Cont. C. To be softly applied, the principal support being on one side of the nose or on one of the orbital edges. The medium O to be taken by the thumb and the fore-finger at the point where it joins the cont. The *firmer* it

is grasped, the *weaker* the vibration. Vbr. is set in motion *after* the application of the cont. Fig. 8, 27. 8—10 sec. A short interruption and repetition. Mov. becomes stronger, if the cont. is used without any medium. Fig. 12. In this case, however, Mov. is to be continued for a shorter period.

Fig. 10.
Mov. II.

It may also be performed in another way by placing two or three fingers very slightly across the eye and supporting the cont. G or K against them. May likewise be taken in a standing posture.

V. **Sitting bridge-of-the-nose vibration.** Com. pos. = I. Fig. 13. Cont. P is pushed firmly along the nose towards

the bridge, sc. the angle of the frontal bone and the nose. The medium O is held as in IV. The application of the cont. becomes more steady, if the India-rubber ring B is placed above it. Fig. 14 *a*. Vbr. is not set going until the

Fig. 11.
Mov. IV.

cont. has been applied. Fig. 8, 27. 10—15 sec. To be repeated after a short pause. Mov. becomes stronger if the cont. is directly inserted into Vbr. Fig. 15. May also be taken in a standing position.

VI. **Sitting nose frict. vibration.** Com. pos. = I. Fig. 15. Cont. P. The vibration is performed under slow stroking along the nose down to the nostrils. Fig. 8, 27. Other-

Fig. 12.
Mov. IV.

wise = V. The vibration is also performed on different parts of the nose by means of the cont. F. May likewise be taken in a standing position.

VII. **Sitting ear vibration**. Com. pos. = I. Fig. 16. Cont. F, A is loosely inserted and supported against the anterior part of the orifice of the ear. The medium O is held as in IV. Vbr. is not to be set in motion, until

Fig. 13.
Mov. V.

the contact has been applied. Fig. 8, 27. 10—15 sec. After a short pause to be repeated. Mov. increases in strength, if the contact is fixed directly into Vbr. Fig. 17.

Fig. 14.
Mov. V, IX, X.

VIII. **Sitting cheek pressure vibration.** Com. pos. = I. Fig. 18. Cont. K, F, E. To be performed under alternately light and heavy pressure on different parts of the jaw. Fig. 8, 27. 10—15 sec. Short pause and repetition. Mov. is also applied in conjunction with frictions, in which case the pressure must be somewhat diminished.

Fig. 15.
Mov. V, VI.

IX. **Sitting throat vibration.** Com. pos. = I. The head to be bent and stretched forward a little, the mouth opened and the lower jaw hanging quite lax. Fig. 19, 20. The two points of the cont. H are bent outwards and placed across the throat below and close to the lower jaw.

The medium O is seized as in IV, fig. 8, 27. 10—20 sec. A short pause and repetition. The grasp of the contact becomes stronger, if the India-rubber ring B is fixed over it, fig. 14 *c*. The vibration becomes more violent, if the medium N is used together with the ring.

Fig. 16.
Mov. VII.

Fig. 20 represents a patient performing the movement unassisted.

Vibration can also be applied on one side only of the gorge, the throat or the neck. Fig. 21. Cont. G, K, E. It may also be taken in a standing position.

X. **Support standing throat-, gorge-or larynx-vibration.** Com. pos. = Pn. standing with his back leaning against a wall, a door or something like that. Otherwise = IX. When Mov. is administered by an operator, the latter has to place his left hand on Pn's neck, fig. 22. Cont. H is

Fig. 17.
Mov. VII.

applied round the gorge, the windpipe or the larynx. In other respects = IX, fig. 8, 27. If a relaxing of the contact be necessary, the ring must be raised a little, fig. 14 *b*. Is also administered in a sitting position.

XI. **Sitting throat-pit pressure vibration.** Com. pos. = IX. Cont. F, E to be applied as in fig. 8, 27. The vibration is performed repeatedly under slight pressure inwards and downwards. 6—8 sec. each time. In the earliest applications the medium O has to be used.

Fig. 18.
Mov. VIII.

POSTERIOR PART.

XII. **Prone-sitting vertex and neck frict. vibration.** Com. pos. = sitting, slightly inclined, the hands resting on the knees and the forehead supported by Opr.'s left hand (cfr fig. 26) fig. 23. Cont. K, E. The friction to be executed slowly and with a slight pressure in parallel lines from the vertex backwards to the neck. Fig. 8.

10—20 sec. When Mov. is being performed across the vertex only, the support may be applied to the neck. Fig. 24. The medium O must always be used in the beginning, when vibrations are administered on the head.

Fig. 19.
Mov. IX.

The vibration may also be performed without friction with point-pressure only.

XIII. **Prone-sitting neck frict. vibration upwards.** Com. pos. = XII. Fig. 25. Cont. K, E. The friction is

Fig. 20.
Mov. IX.

performed under slight pressure from different points on the base of the neck along the posterior head. Fig. 8. 10—20 sec. Is also to be performed with point-pressure only.

Fig. 21.
Mov. IX.

XIV. **Prone-sitting cross neck frict. vibration.** Com. pos. = XII. Cont. K, E. The friction is performed under slight pressure from the middle of the base of the neck outwards. Fig. 8, 37. 10—20 sec. Is also performed with mere point-pressure.

Fig. 22.
Mov. X.

XV. **Prone-sitting neck throat frict. vibration.** Com. pos. = XII. Fig. 26. Cont. K, E. Is to be executed under different pressure with slow frictions from different points of the base of the neck in various directions down the

Fig. 23.
Mov. XII.

neck towards the shoulders. Fig. 8, 37. 20—30 sec. or more acc. the extension of Mov. Is also performed without friction with only point-pressure.

THE TRUNK.

ANTERIOR PART.

XVI. **Left raised span-standing heart vibration.** Com. pos. = standing, the left forearm and hand leaning against a doorpost, a wall or such thing. The right hand on the

Fig. 24.
Mov. XII.

hip. The chest well forward. Opr. places his left hand between Pn.'s right arm and waist and supports with that hand the left side of the back of Pn.'s thorax, fig. 28. Cont. G is loosely applied across the heart, kept there or slowly drawn under different pressure in the direction

indicated, fig. 27. 10—12 sec. A short rest — Pn.'s left arm is meanwhile relieved — and then repetition of Mov.

Fig. 29 represents Pn. administering the movement himself with his right hand.

XVII. **Stride-sitting heart vibration.** Com. pos. = erect sitting position, the feet and the knees separated, the

Fig. 25.
Mov. XIII.

hands on the hips. Opr. supporting Pn. with his left hand between the shoulders. Fig. 30. Cont. G. Otherwise = XVI.

XVIII. **Half-lying heart vibration.** Com. pos. = reclining position. Opr. grasps with his left hand as in XVI and performs with the same hand several times under the

Fig. 26.

Mov. XV.

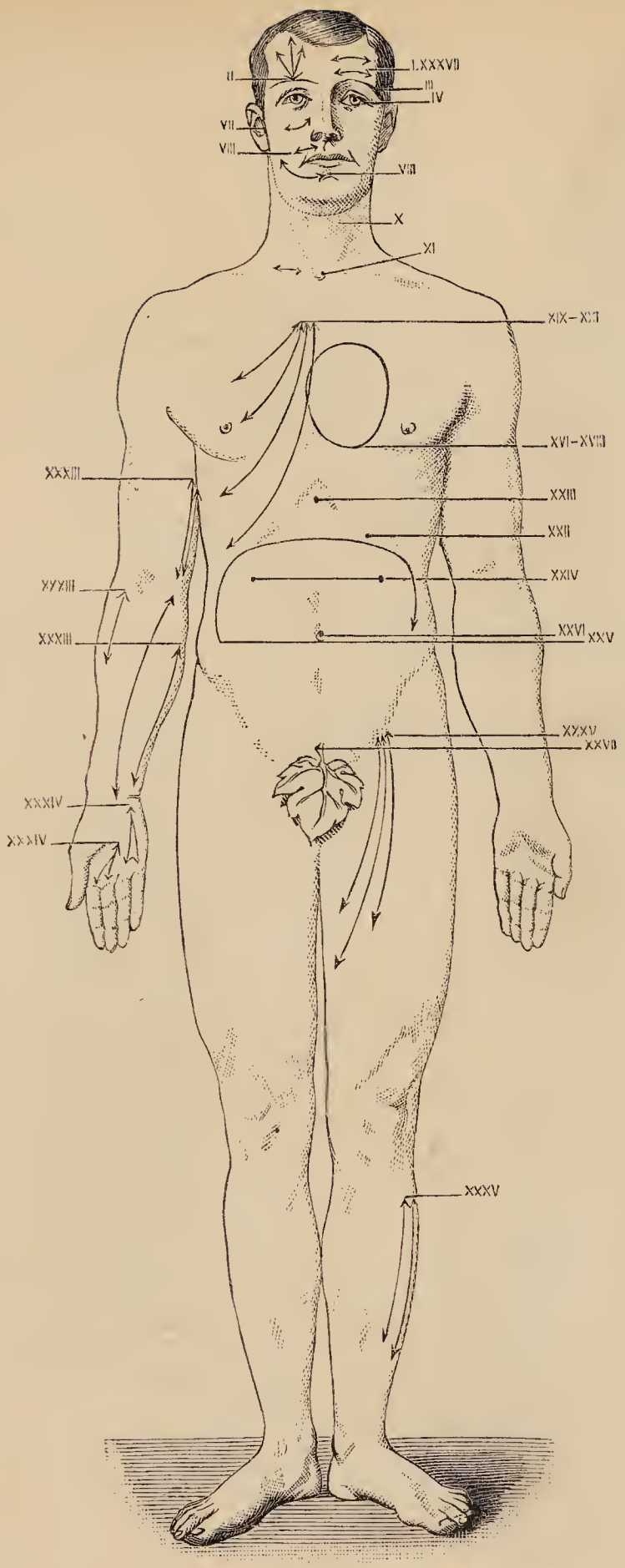

Fig. 27.

Mov. I—XI, XVI—XXVIII, XXXIII—XL.

Fig. 28.
Mov. XVI.

Fig. 29.
Mov. XVI.

Fig. 30.
Mov. XVII.

vibration a slow, gentle lifting of Pn.'s thorax. Fig. 31. Cont. G. Otherwise = XVI.

XIX. **Stride-sitting chest frict. vibration.** Com. pos. = XVII. Cont. G, K, E. To be executed under different

Fig. 31.
Mov. XVIII.

pressure by strokings in directions indicated, from the breast-bone along the ribs outwards. Fig. 27. 3—4 minutes or more acc. the extension of Mov. Is also to be performed with pressure only on different points without friction.

XX. **Opposite inclined stride-sitting chest frict. vibration.** Com. pos. = sitting, leaning forward, the hands resting on Opr.'s shoulders. Hands, elbows and shoulders on the same level. Fig. 32. Cont. G, K, E. Otherwise = XIX.

Fig. 32.
Mov. XX.

XXI. **Lying chest frict. vibration.** Com. pos. = perfect rest. Fig. 33. Cont. G, K, E. To be performed as XIX. Is also applied in semi-recumbent position. Fig. 31.

Fig. 33.
Mov. XXI.

Fig. 34.
Mov. XXII.

Fig. 35.
Mov. XXII.

XXII. **Squat half-lying left lower ribs vibration.** Com. pos. = the head leaning backwards, the feet placed together, the knees bent and falling outwards, by their own weight. The whole body at rest. Fig. 34. Cont. G, K. Is being performed under different pressure inwards and upwards beneath the ribs. Fig. 27. 20—30 sec. Some rest and repetition.

Fig. 35 represents Pn. administering Mov. himself.

XXIII. **Squat half-lying pressure vibration on the pit of the stomach.** Com. pos. = XXII. Cont. K, F, E to be applied 3 to 5 cm. (= 1 or 2 inches) below the breast-bone in the angle of the ribs. Fig. 27. To be performed at a slowly increasing pressure inwards and upwards. 10—12 sec. Some rest and repetition.

XXIV. **Squat half-lying kidney pressure vibration.** Com. pos. = XXII. The upper part of the trunk at a somewhat smaller angle to the horizontal plane than in the previous case and the feet more elevated. To be performed at a slowly increasing pressure a little from the side inwards. Fig. 27. Cont. G, K. 10—15 sec., a short interval and repetition. Is to be succeeded by friction on the back in the regions of the kidney.

XXV. **Squat half-lying large intestine pressure vibration.** Com. pos. = XXIV. Cont. K, F, E. To be performed under constant, slowly increasing pressure in the direction indicated by the arrow on fig. 27. 10—12 sec., whereupon the contact is moved to the next point, and so on. It may also be executed with frictions. Cont. K, E.

Fig. 36.
Mov. XXVII.

XXVI. **Squat half-lying cross stomach vibration.** Com. pos. = XXIV. Cont. G. Medium N. To be performed under slowly increasing pressure alternately directed a little more upwards or downwards along the body, but with the contact fixed always on the same place. Fig. 27. 20—30 sec. Some rest and repetition. Vbr. must be kept in both hands.

XXVII. **Squat stride half-lying bladder pressure vibration.** Com. pos. = XXIV, but with the feet separated. Fig. 36. Cont. K, F, E to be applied just above the pelvis-bone in the central line. Fig. 27. To be performed under slowly increasing and decreasing pressure inwards and upwards beneath the edge of the pelvis-bone. 10—15 sec. Rest and repetition.

XXVIII. **Squat stride half-lying prostate gland vibration.** Com. pos. = XXVII. Cont. K, E to be applied 8 to 10 cm. (= 3 or 4 inches) in front of the anal aperture. Under the vibration slow frictions at light pressure are to be made on both sides of and in the central line backwards to the anus and a few times along the inner side of the back of the thighs. 20—30 sec.

POSTERIOR PART.

XXIX. **Heave-span-standing back pressure vibration** (chest-expanding). Com. pos. = Pn. standing in a door-opening, between two walls or such like. The forearms and hands supported. Fig. 38. Cont. G to be applied in the angle of the shoulder-blades. Fig. 37. To be per-

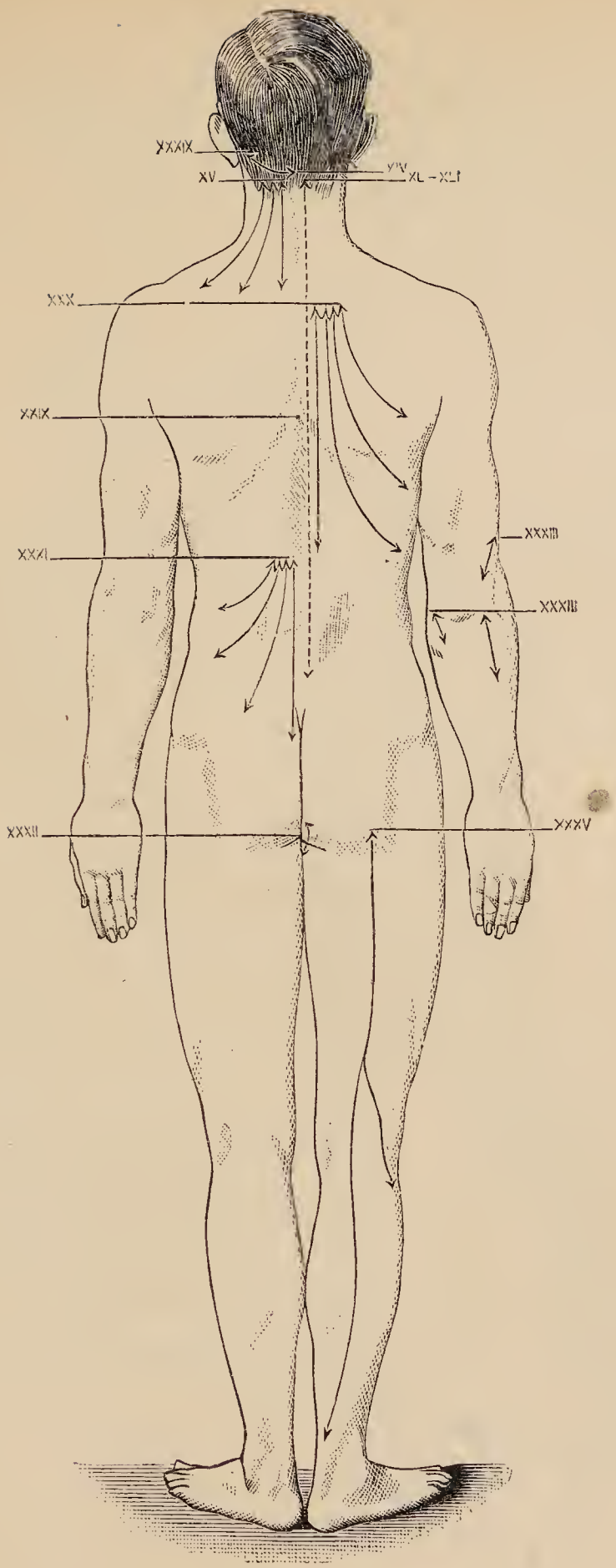

Fig. 37.
Mov. XIV, XV, XXIX—XXXV, XXXIX, XLI.

formed at slowly increasing and decreasing pressure forwards, while Pn. rises on his toes, sinking down again as the pressure is diminished. 6—8 sec. and repetition.

XXX. **Stride-sitting chest and back frict. vibration.** Com. pos. = XVII. Cont. G, K, E. Opr. supports Pn.'s shoulder with one of his hands. To be performed under different pressure and with slow friction sidewards along the ribs and the backbone. Fig. 37. 1—4 minutes or more acc. the extension of Mov. Is also to be performed without friction with point-pressure only and may likewise be taken in an opposite inclined sitting position, in which case Pn. places his hands against a wall, the back of a chair, on his own knees or the like.

P. may turn the machine himself, as shown in fig. 39, with the hand on the side not affected by the operation.

This movement is also to be administered in a falling support sitting position. Pn. rests his neck on the top of Opr.'s head either directly or with a small cushion between. Fig. 40. By increasing and decreasing the pressure on the back Opr. is enabled to effect an expansion of the chest in this position; Opr. must then hold Vbr. with both hands. A similar movement may also be performed, while Pn. is lying face downwards and leaning on his elbows. Fig. 41.

XXXI. **Opposite-standing loin pressure vibration.** Com. pos. = Pn. standing with the palms of his hands resting against a wall, a door or otherwise, the ends of his fingers turned towards each other. Opr. supports with the palm of his left hand Pn.'s abdomen in the regions of the navel. Fig. 42. Cont. G, K, E. Is to be performed

Fig. 38.
Mov. XXIX.

Fig. 39.
Mov. XXX.

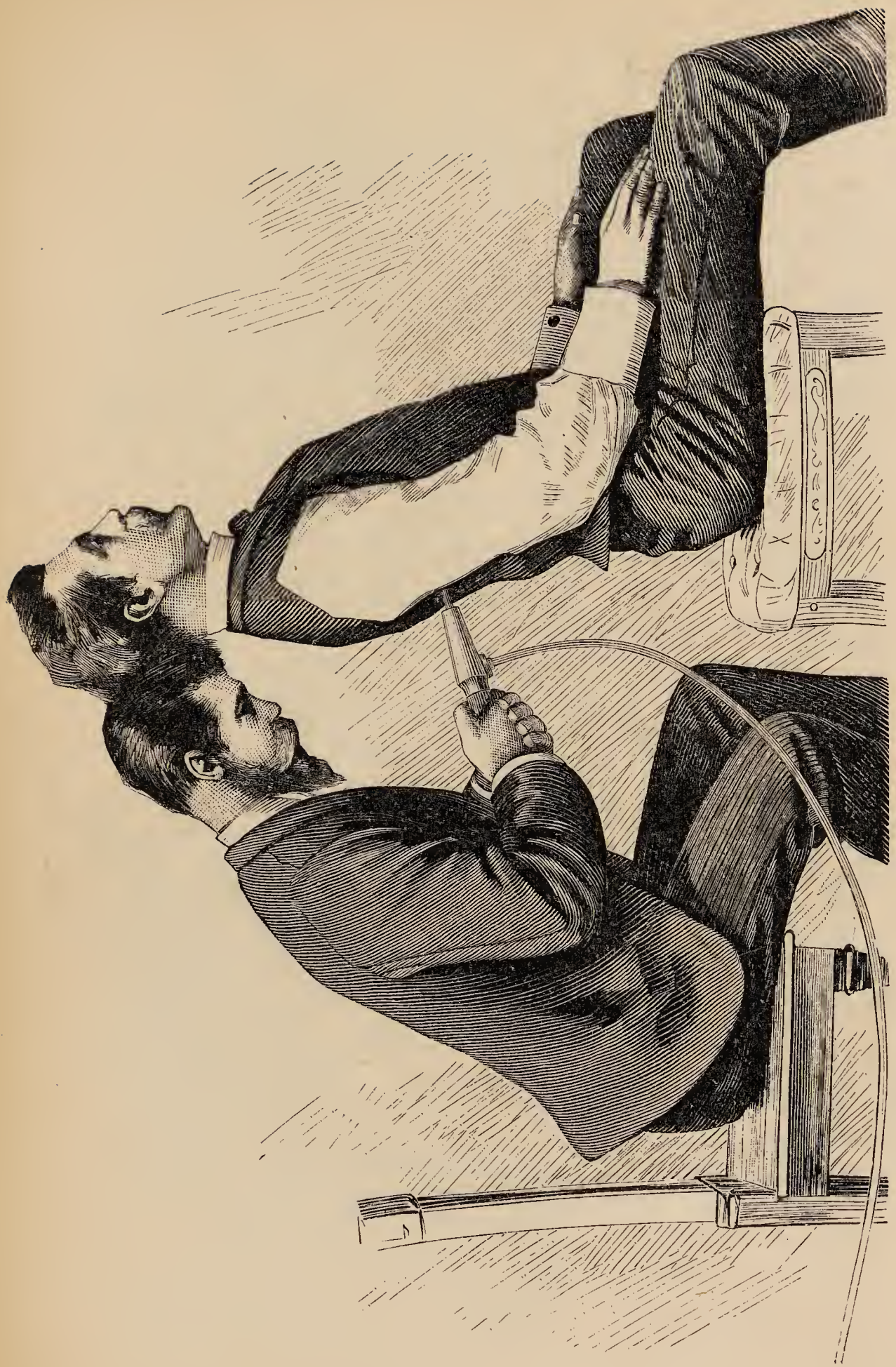

Fig. 40.
Mov. XXX.

Fig. 41.
Mov. XXX.

Fig. 42.
Mov. XXXI.

at increasing and decreasing pressure with slow frictions in the directions indicated. Fig. 37. 3—4 minutes or more acc. the extension of Mov. May also be taken stride-

Fig. 43.
Mov. XXXIII.

standing with the feet apart, or in a stride-sitting (fig. 30), inclined-sitting (fig. 39), falling-sitting (fig. 40) or forwards-lying position (fig. 41).

Fig. 44.
Mov. XXXIII.

XXXII. **Opposite stride-standing anal frict. vibration.** Com. pos. = XXXI. The feet apart, the heels turned outwards and the toes inwards. Cont. E. The friction is performed round the anus, chiefly from behind for-

Fig. 45.
Mov. XXXIV.

wards. Fig. 37. 20—30 sec. — Can also be applied in an opposite inclined stride-sitting position on two chairs at a little distance from each other. Otherwise = XXXII.

THE UPPER EXTREMITIES.

XXXIII. **Half-yard-sitting arm frict. vibration.** Com. pos. = Pn. grasping the back of a chair or the edge of

Fig. 46.
Mov. XXXV.

Fig. 47.
Mov. XXXV.

a table or placing his arm outstretched on a horizontal plane. Fig. 43. Cont. G, K, E. Opr. stands behind and a little to the side of Pn., supporting with his other hand Pn.'s arm or managing Vbr. with both hands. Fig. 44. Generally to be performed under hard pressure and with frictions along the whole length of the arm. Fig. 27, 37. Can also be executed with only point-pressure.

Fig. 48.
Mov. XXXVI.

XXXIV. **Sitting finger and hand frict. vibration.** Com. pos. = one side of Pn.'s hand resting with straight fingers on a cushion or in Opr.'s hand. Fig. 45. Cont. G, K, E. In the beginning to be performed at a slight pressure with frictions along the fingers and the hand. Fig. 27. May also be executed with point-pressure only.

XXXV. **Half lying leg frict. vibration.** Com. pos. = XVIII. The leg to be treated is resting on Opr.'s knee, a chair or simular support. Fig. 46. Cont. G, K, E. The

Fig. 49.
Mov. XXXVI.

vibration is performed under slow frictions with stronger pressure on thick muscular portions. Fig. 27, 37. On the posterior part of the leg Mov. had better be performed in a forwards lying position. Fig. 47.

May also be applied in an opposite stride standing position as in XXXII. Opr., standing by the side of Pn., has to support Pn.'s knee with the inner part of one of his legs. Slow friction and strong pressure, which is to be considerably diminished underneath the knee.

Fig. 50.
Mov. XXXVII.

XXXVI. **Half-lying foot frict. vibration.** Com. pos. = XXXV. Fig. 49. Cont. G, K, E. Is to be executed at slighter and stronger pressure alternately and with slow

frictions along the sole of the foot. Fig. 48. Is also performed with point-pressure only.

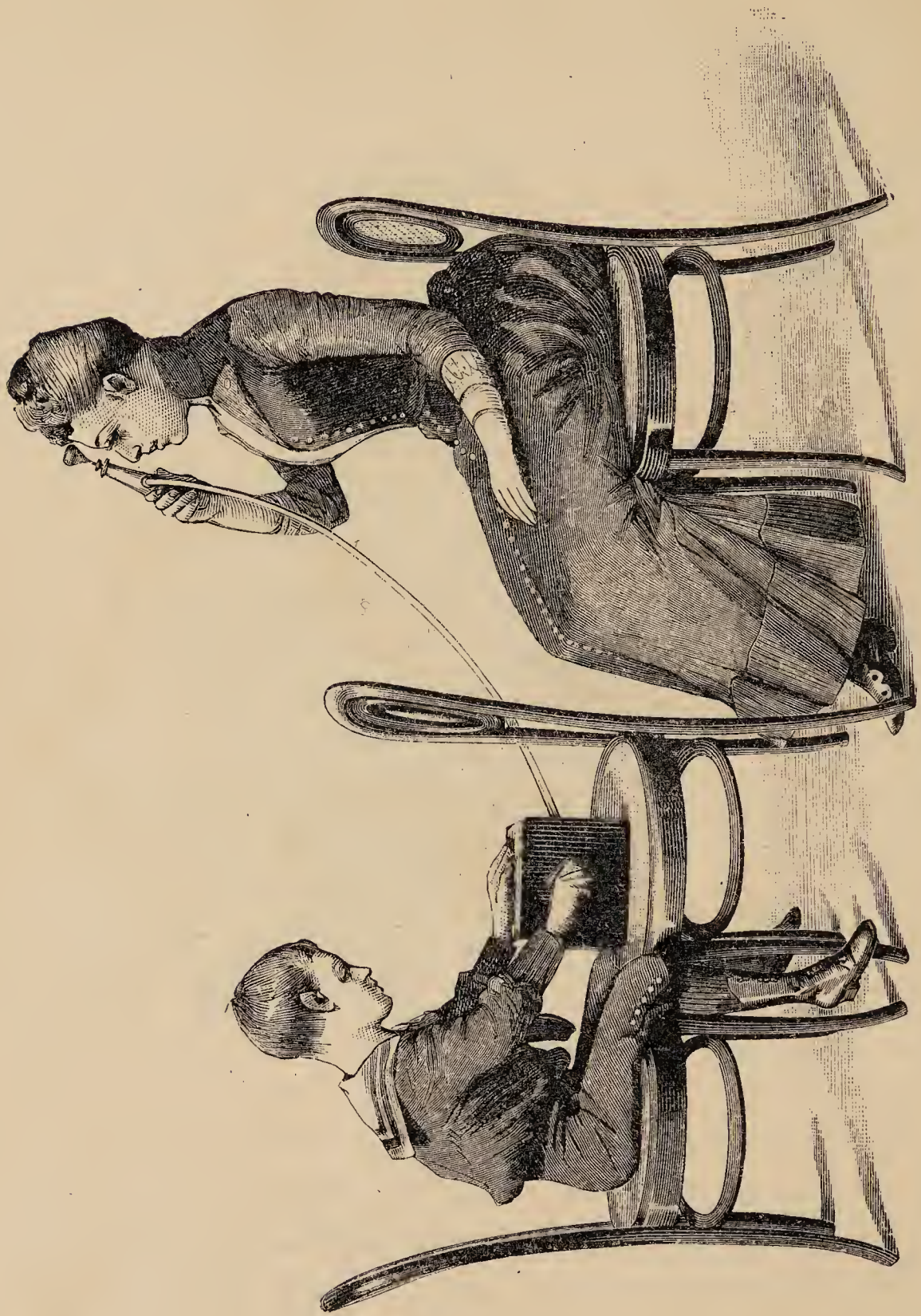

Fig. 51.
Mov. XXXVII.

PERCUSSION- OR CHOPPING-MOVEMENTS.

When percussion is performed especial care must be taken to keep Vbr. in such a position, relative to the part of the body where the percussion is applied, that *the*

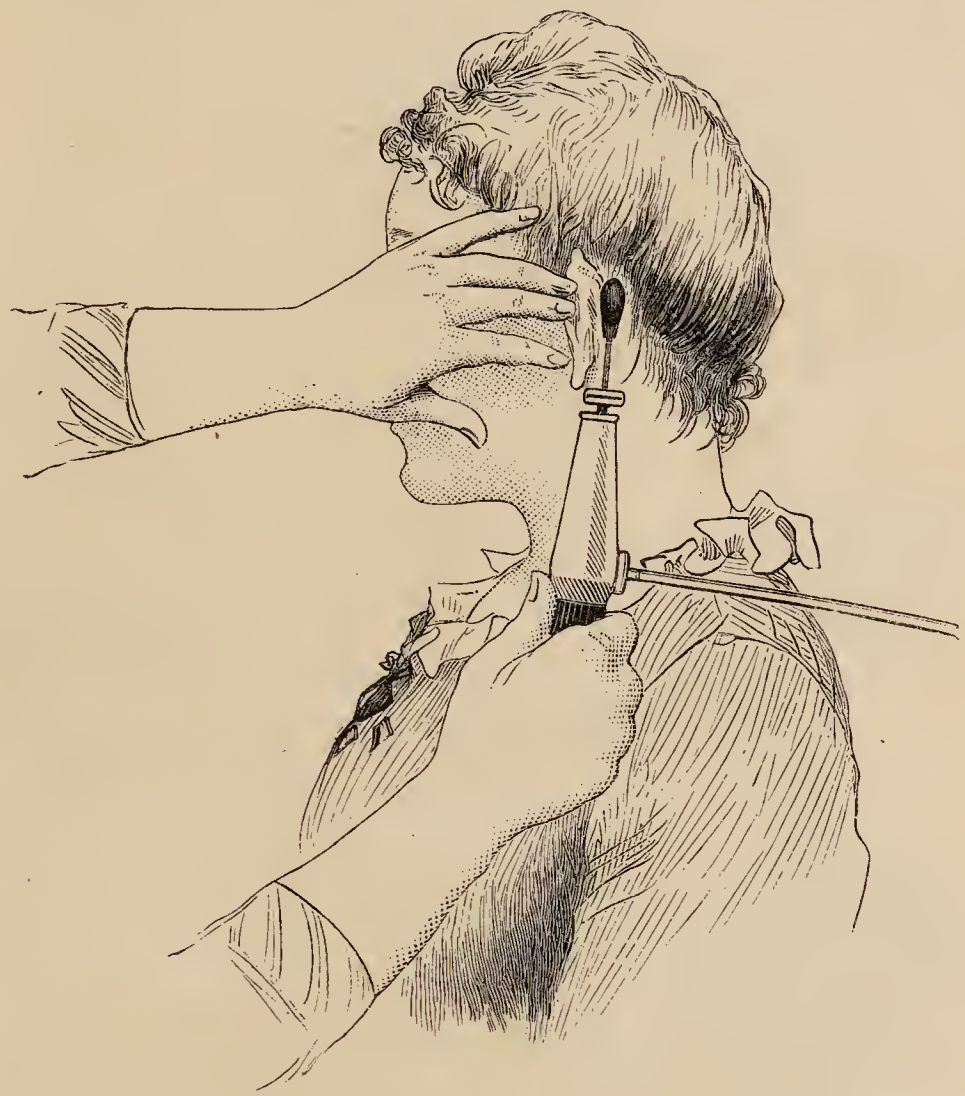

Fig. 52.
Mov. XXXIX.

upper fixture of the flexible shaft is bent aside from it — not pointing against it or straight out. Fig. 50—53.

The contact is to be screwed on *firmly* to Vbr.

The machine ought to be turned a little quicker, while the percussion is being administered.

Fig. 53.
Mov. XLI.

The percussion becomes weaker, if the contact is pressed closer to the part of the body which is to be treated.

XXXVII. **Sitting front percussion**. Com. pos. = I. Fig. 50, 51. Cont. C, L. To be carried out across the forehead, from the central part sidewards to the temples. Fig. 8, 27. 20—30 sec.

XXXVIII. **Sitting nose percussion**. Com. pos. = I. Cont. C, L. To be performed all along the sides of the nose. Fig. 8, 27. 20—30 sec.

XXXIX. **Sitting ear percussion**. Com. pos. = I. Fig. 52. Cont. C, L. To be performed on the anterior as well as the posterior part of the ear. Fig. 8, 27, 37. 20—30 sec.

XL. **Inclined-sitting cross neck percussion.** Com. pos. = XII. Is carried out from the centre of the neck towards the sides of its base. Fig. 8, 37. 20—30 sec. or more acc. the extension of Mov.

XLI. **Opposite inclined-sitting back longitudinal percussion**. Com. pos. = XXX. Cont. L. Opr. moves Vbr. slowly down the back from the neck to the loin. Fig. 37. 1—4 minutes or more.

Besides the above mentioned a great many other forms of percussion may be performed on the head, the trunk and the extremities by means of **the Vibrator.**

ABBREVIATIONS.

A—P denote all the different contacts. Fig. 2.

acc. = according to.

fig. = figure.

cont. = contact (Fig. 2).

Mov. = the movement.

Opr. = the operator, who performs the movement.

Pn. = the patient, on whom the movement is being performed.

sec. = seconds.

Com. pos. = the commencing position, sc. the particular position, which the patient has to maintain, while the movement is being performed.

frict. = **friction (stroking).**

Vbr. = the Vibrator.

I—XLI signifies the number in the text of the movement described and refers from the figures to the description.

 indicates the directions (movement-lines), in which the frictions (strokings) etc. chiefly ought to take place.